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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,520	10/27/2003	Hideki Komatsuda	105193.06	2225
25944	7590	02/22/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			FULLER, RODNEY EVAN	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/693,520

Applicant(s)

KOMATSUDA, HIDEKI

Examiner

Rodney E. Fuller

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67-71, 73, 75-79 and 83-87 is/are allowed.
- 6) ☒ Claim(s) 56-66, 72, 74, 80-82 and 88-91 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

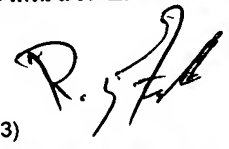
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

RODNEY FULLER
PRIMARY EXAMINER



Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/27/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Remarks

In response to applicant's Supplemental Preliminary Remarks, dated June 30, 2004, the examiner acknowledges applicant's "statement alleging that there is a basis upon which the Applicant is entitled to a judgment relative to the patentee" in accordance with MPEP 2308. The examiner also acknowledges applicant's submission of English-language translations of the Japanese priority documents. Thus, the examiner has withdrawn the 35 USC 102 rejection as set forth in the Office Action mailed April 25, 2003 (parent application 10/060,340).

Claims 56-91 are pending. Claims 56-91 respectively correspond to claims 1-8, 10, 11, 14-19, 23-25, 27, 34-37, 39-41, 43-49, 56 and 57 of U.S. Patent No. 6,195,201; and the applicant has requested an interference be declared between the present application and U.S. Patent No. 6,195,201. However, before an interference can be declared all patentability issues must be addressed. In the Office Action, mailed April 25, 2002 (parent application 10/060,340), claims 56-66, 72, 74, 80-82 and 88-90 were rejected under 35 USC 112 as containing subject matter which was not described in the specification.

Regarding the 35 USC 112 rejection, the applicant has made the following arguments in the Supplemental Preliminary Remarks, dated June 30, 2004:

Regarding Claims 56 and 66:

The "second faceted mirror having facets with a plurality of different tilts" of claim 56 is supported in the original application, for example, by page 27, lines

8-10 ("Alternatively, first and second reflecting groups may be constituted such that at least one of the first reflecting element group and second reflecting group is capable of being inclined by a small amount.") and page 44, lines 4-5 ("This is achieved by bending the entirety of one of second reflecting element group 360b (220b) in optical integrator 220 (Fig. 15 and Fig. 23).").

After review of the cited sections, the examiner maintains that the claimed limitations of "said second faceted mirror having facets with a plurality of different tilts..." is not disclosed. (Underline emphasis added) The cited sections (page 27, lines 8-10) indicate that the first and second element group is capable of being inclined. The reflecting element group (Fig. 5, ref.# 60) is made up of reflective elements (Fig. 5, ref.# E), which correspond to the "facets" of the claims. Furthermore, the cited section on page 44, lines 4-5, is related to bending (or arguably tilting) "the entirety of one of second reflecting element group." (Underline emphasis added). Thus, the cited sections in the specification would support a limitation wherein the "second faceted mirror" is tilted. The limitation wherein the individual facets that make up the mirror are tilted is not supported.

Regarding claim 72:

The feature that "each of the plurality of concave mirrors of said second mirror array are tilted to overlap images at the illumination field of claim 72 is supported, for example, by the specification at page 44, lines 4-15.

After review of the cited sections, the examiner maintains that the claimed limitations "of each of the plurality of concave mirrors of said second mirror array are

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tilted to overlap images at the illumination field” is not disclosed. (Underline emphasis added) The cited section does not indicate that the individual mirrors that make up the second reflecting element group are concave. Further, the cited section does not support (as noted above) that the individual mirrors (i.e., facets) are tilted.

Regarding claims 74 and 80:

The feature that “the first plurality of arcuate facets are randomly tilted” and the feature that “each mirror in the mirror array of the first reflective fly’s eye means is randomly titled of claims 74 and 80, respectively, is supported, for example, by page 25, lines 20-24 and page 26, lines 10-14 of the specification.”

After review of the cited sections, the examiner maintains that the claimed limitations of (claim 74) “the first plurality of arcuate facets are randomly tilted” and (claim 80) of “each mirror in the mirror array of the first reflective fly’s eye means is randomly tilted within a predetermined range” is not disclosed. (Underline emphasis added) The cited section (page 25, lines 20-24) indicates that “arbitrary reflecting elements” (i.e., facets or mirrors) are “rotated by just a prescribed amount”. The cited section (page 26, lines 10-14) indicate that an arrangement between the first and second reflecting group. Thus, these cited sections do not indicate that the facets are randomly tilted.

Regarding claim 81:

The feature “each of second plurality of mirrors having a predetermined displacement and angular tilt” of claim 81 is supported, for example, by page 27,

lines 8-10 (predetermined tilt) and page 28, lines 6-8 (predetermined displacement).

After review of the cited sections, the examiner maintains that the claimed limitations of (claim 81) "each of second plurality of mirrors having a predetermined displacement and angular tilt" is not disclosed. (Underline emphasis added) The cited section (page 27, lines 8-10) indicates (as noted above) that the first and second element group is capable of being inclined. The section does not suggest that the individual mirrors that make up the "group" are displaced or tilted. Further, the cited section (page 28, lines 6-8) states: "*Accordingly, if the numerous light source images are formed discretely, the numerous reflecting elements E2 in the second reflective element group can be arranged discretely with gaps.*" The examiner maintains that this disclosure does not support the claimed limitation wherein "each of second plurality of mirrors having a predetermined displacement and angular tilt."

Regarding claims 88-90:

The feature that "correlation between the number of facets of the first and second faceted mirrors is varied" and "correlating the number of facets of the first faceted mirror receiving predetermined energy to the second faceted mirror" of claims 88 and 90, respectively, and the feature that "the size, shape and location of the number of facets of the second mirror are varied" of claim 89 are supported, for example, in Fig. 26 embodiment."

After review of Figure 26 and corresponding sections in the specification (page 25, line 20 – page 26, line 13; page 24, lines 407; page 27, lines 7-13; page 32, lines

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16-21; and page 26, lines 7-20), the examiner maintains that the claimed limitations (see rejection below) are not disclosed.

Thus, the 35 USC 112 rejection set forth in the Office Action mailed April 25, 2003 is maintained and repeated below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 56-66, 72, 74, 80-82 and 88-91 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 56, the applicant indicates that the limitation is disclosed by "Item 360b; Figs. 22-25; page 24, line 21 – page 26, line 19, page 27, line 9-20." However, after review of these sections, the examiner maintains that the claimed limitation of "said second faceted mirror having facets with a plurality of different tilts ..." is not disclosed. (Underline emphasis added)

Claims 57-65 depend from claim 56 and therefore include the deficiencies of claim 56.

Regarding claim 66, the applicant indicates that the limitation is disclosed by "Fig. 24; page 34-lines 21- page 36, line 19, page 27, lines 9-20." However, after review of these sections, the examiner maintains that the claimed limitation of "said plurality of concave mirrors having a tilt arrangement..." is not disclosed. (Emphasis added)

Regarding claim 72, the applicant indicates that the limitation is disclosed by "Item 36b; Figs. 17, 19, 20, 22-25; page 19, lines 4-9, page 20, lines 5-10, page 21, lines 12-13, page 23, lines 9-16, page 24, line 21- page26, line 19, page 27, lines 9-20." However, after review of these sections, the examiner maintains that the claimed limitation of "each of the plurality of concave mirrors of said second mirror array are tilted to overlap images at the illumination field" is not disclosed. (Emphasis added)

Regarding claim 74, the applicant indicates that the limitation is disclosed by "Item 360a; Figs. 22-24; page 24, line 21 – page 26, line 19, page 27, lines 9-20." However, after review of these sections, the examiner maintains that the claimed limitation of "the first plurality of arcuate facets are randomly tilted" is not disclosed. (Emphasis added)

Regarding claim 80, the applicant indicates that the limitation is disclosed by "Page 24, line 21 – page 26, line 19, page 27, lines 9-20." However, after review of these sections, the examiner maintains that the claimed limitation of "each mirror in the mirror array of the first reflective fly's eye means is randomly tilted within a predetermined range" is not disclosed. (Emphasis added)

Regarding claim 81, the applicant indicates that the limitation is disclosed by "Item 360b; Figs. 22-25; page 24, line 21 – page 26, line 19; page 27, lines 9-20."

However, after review of these sections, the examiner maintains that the claimed limitation of “each of second plurality of mirrors having a predetermined displacement and angular tilt” is not disclosed. (Emphasis added)

Claim 82 depends from claim 81 and therefore includes the deficiencies of claim 81.

Regarding claim 88, the applicant indicates that the limitation is disclosed by “Page 25, line 20 – page 26, line 13.” However, after review of these sections, the examiner maintains that the claimed limitation of “correlation between the number of facets of the first and second faceted mirrors is varied” is not disclosed.

Regarding claim 89, the applicant indicates that the limitation is disclosed by “Page 24, lines 4-7, page 27, lines 7-13, page 32, lines 16-21.” However, after review of these sections, the examiner maintains that the claimed limitation of “the size, shape, and location of the number of facets of the second mirror is varied” is not disclosed.

Regarding claim 90, the applicant indicates that the limitation is disclosed by “Page 26, lines 7-20.” However, after review of these sections, the examiner maintains that the claimed limitation of “undesirable obscurations are eliminated by correlating the number of facets of the first faceted mirror receiving predetermined energy to the second faceted mirror” is not disclosed (Emphasis added)

Regarding claim 91, after review of the specification, the examiner maintains that the claimed limitation of “a position of the multiple images of the source formed on the second faceted mirror are varied by tilting each of the number of facets of the first faceted mirror” is not disclosed. (Emphasis added)

Allowable Subject Matter

3. Claims 67-71, 73, 75-79 and 83-87 are allowed and may be subject to interference proceedings.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney E Fuller
Primary Examiner
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February 16, 2005